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Disease Detectives

Communicable Disease Control *UPDATE*

MECKLENBURG COUNTY HEALTH DEPARTMENT
A Quarterly Publication

Hurricane Isabel and PHRST 7



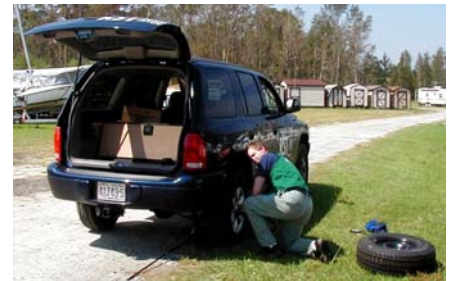
While most of us viewed Hurricane Isabel and its impact in front of our televisions in our comfortable homes, our Public Health Regional Surveillance Team (PHRST 7) traveled to the eastern part of the state to assist in conducting a public health survey of the affected areas. The team members left for Raleigh the day before Isabel was expected to arrive in order to receive training by the CDC to conduct the survey. The surveillance tool used, known as the Rapid Assessment Tool, had been used by the CDC in previous situations involving natural disasters. The purpose of the survey was to determine the public health needs of individuals in the hardest hit areas, which in this situation involved fourteen counties.

Even though their nights were spent in a comfortable Greenville, NC ho-

tel, the team left early each morning for a designated county to conduct the surveys. Teams around the state worked in pairs. Each team went door to door, questioning occupants about various things, such as water supply, electricity, functioning toilet, and medical needs. A frequently encountered problem was that some houses were uninhabitable due to storm damage; therefore, the residents left the area for other shelter and could not be interviewed. For that reason, it sometimes took the entire day just to interview a few residents. In the areas hit hardest by the storm, the team members faced similar problems to the residents. Problems, such as limited number of food facilities for lunch breaks, limited bathroom facilities, heat and sunburns, and, of course, insects, made for long and tiring days. In spite of

the heat, it was necessary to wear long sleeved shirts and pants to prevent sunburn and insect bites.

Another obstacle faced by PHRST 7



was a flat tire obtained in a parking lot of a trailer park. One team member confidently changed the tire, while the other team member provided "supervision".

The team spent a total of five days in the areas hardest hit by the hurricane completing the surveys and tolerating the elements. They returned to Charlotte with greater confidence in their ability to react quickly when disaster strikes.

For more information, contact PHRST 7 at brownve@co.mecklenburg.nc.us or 704.432.1973.



Starting with this issue, the *Update* will find its way to many of our readers by a different route. We hope to reach more people in a more timely manner by emailing each issue to those who request the change. If you would like to be included (or excluded) on our email list, please contact Lorraine Houser at houselm@co.mecklenburg.nc.us or 704.336.6438.

Fit Testing



Taste Threshold Screening with Sucrose

Bobby Kennedy, Industrial Hygienist with PHRST 7, worked to “fit test” CD Control with new N-95 respirators. “Fit testing”, a required annual program includes a medical evaluation, training session and a taste threshold screening with sucrose.

The N-95 filtering face piece respirator captures at least 95% of the most pene-

trating particles and has a higher efficiency for other size particles. However, without the proper fit, unfiltered air will leak around the edges of the mask.

“Respirators reduce but do not eliminate airborne contaminants,” said Bobby. “Efficiency, fit and time all play a role in helping to reduce exposure.”



Monica O'Lenic “fit tested” and safe!

“Just because a mask feels right doesn't mean it's protecting you. A proper seal is vital for protection.”

Bobby Kennedy

Hepatitis A Among Concert-Goers

The Centers for Disease Control and Prevention (CDC) is investigating a multi-state outbreak of hepatitis A among young adults who attended outdoor concert and camping events featuring “jam bands.” A total of 26 cases have been reported among residents of 10 states. The bands performing at these concerts and festivals attract fans who travel from one concert to another. These events are usually multi-day events involving camping on established or impromptu campgrounds where sanitary conditions are poor.

Persons exposed at summer concerts might not become symptomatic until early fall due to the relatively long incubation period ranging from 15-50 days. Transmission could continue with the start of fall

tours.

The CDC is requesting that young to middle-aged adults with newly diagnosed hepatitis A be asked if they have attended a “jam band” concert or any outdoor concert and associated camping event. Cases of hepatitis A among concert attendees or their infected contacts should be reported to CDC through the Mecklenburg County Health Department, and available serum should be saved for molecular testing at CDC.

For more information view: www.cdc.gov/ncidod/diseases/hepatitis/jam_band or contact Monica O'Lenic at olenimt@co.mecklenburg.nc.us or 704.336-6436.

This periodical is written and distributed quarterly by the Communicable Disease Control Program of the Mecklenburg County Health Department for the purpose of updating the medical and veterinary community in the activities of Communicable Disease Control. Program members include: Health Director—Peter Safir; Medical Director—Dr. Stephen R. Keener; Health, Environmental Health Administrator—Bobby Cobb; Director, CD Control—Carmel Clements; Program Chief—Wanda Locklear; CD Control nurses—Shannon Gilbert, Nancy Hill, Jane Hoffman, Lorraine Houser, Monica O'Lenic, Elizabeth Quinn; TB Outreach nurses—Marcia Fretchette (also Adult Day Health), Faye Lilieholm; Child Care nurse—Gail Mills; Rabies/Zoonosis Control—Al Piercy; Program Chief STD/HIV Surveillance—Carlos McCoy; Syphilis Coordinator—Ann White; DIS—Mary Ann Curtis, Michael Rogers, Lavon Sessions; Regional Surveillance Team—Bobby Kennedy, Belinda Worsham; Office Assistants—Vivian Brown, Linda Kalman, Lisa Liner.

Lorraine Houser
Editor

Did you know.....

.....that 3 new communicable disease rules received permanent status by the Rules Commission in October? The changes in the NC Administrative Code adds Vaccinia and SARS as reportable diseases and stipulates their specific control measures.

Hepatitis B Vax—New ACIP Recommendations



The following is a summary of new recommendations from the Advisory Committee for Immunization Practices:

—**NEW:** The first dose of hepatitis B vaccine should be given to all infants prior to hospital discharge regardless of HBsAg status of mother.

—**NEW:** For premature infants weighing less than 2,000 grams (4lb. 6 oz) born to HBsAg negative mothers, the optimal timing of the first dose of hepatitis B vaccine has not been determined. However, these infants can receive the first dose at age 1 month. If these infants are discharged from the hospital prior to 2,000 grams of weight and prior to chronological age 1 month, they can be given the first dose of hepatitis B vaccine if they are medically stable and have gained weight consistently. (MMWR, Feb 8, 2002)

—**NEW:** Premature infants born to HBsAg positive mothers and premature infants born to mothers with unknown HBsAg status must receive

both hepatitis B vaccine and HBIG within 12 hours of birth. The same recommendation can be found in the American Academy of Pediatrics- Red Book, 1997.

—**NEW:** The 2002 General Recommendations on Immunization specify that by chronological age 1 month, all premature infants, regardless of birth weight or gestational age are as likely to respond as adequately as older and larger infants to immunization. A 2002 document cites studies indicating that immunocompetence is present at chronological age 1 month. (MMWR, Feb. 8, 2002)

—**NEW:** The 2002 recommendations indicate that any dose of hepatitis B administered by any route or site other than intramuscularly in the anterolateral thigh or deltoid muscle should not be counted as valid and should be repeated unless serologic testing indicates an adequate response has been achieved. (MMWR, Feb. 8, 2002)

—**UNCHANGED:** Term infants born to

HBsAg positive mothers, should receive HBIG and hepatitis B vaccine within 12 hours of birth. (MMWR, Nov 22, 1991).

—**UNCHANGED:** For term infants born to mothers with unknown HBsAg status, the mother should receive testing for HBsAg as soon as possible and the infant should receive hepatitis B vaccine within 12 hours of birth. If the mother's HBsAg is positive, the infant should receive HBIG as soon as possible and within 7 days of birth. (MMWR, Nov 22, 1991)

Refer to the Immunization Action Coalition "Labor and Delivery and Nursery Unit Guidelines to Prevent Hepatitis B Virus Transmission" at: <http://www.immunize.org/catg.d/p2130per.pdf>.

For more information, contact Monica O'Lenic at olenimt@co.mecklenburg.nc.us or 704.336.6436.

FAQ

Q. What is "Primary Human Immunodeficiency Virus?"

A. Primary HIV infection (a.k.a. acute HIV illness or syndrome, acute retroviral syndrome) refers to the period from initial infection with HIV to complete seroconversion. It occurs about 1 to 4 weeks after infection by HIV. Typical symptoms may include fever, rash, arthralgia or myalgia, headache, fatigue, decreased appetite or >5 lb. weight loss, sore throat, and/or swollen lymph nodes (mostly cervical). The duration of symptoms is usually between 1 ½ to 4 weeks. It may share similar symptoms with mononucleosis, secondary syphilis,

drug reactions, CMV, toxoplasmosis, rubella, and viral hepatitis. Studies have shown that symptomatic primary infection may occur as often as 50% in unselected populations. However mostly it is missed as a diagnosis.

Q. Why is it important to make an early diagnosis of acute HIV?

A. Patients with symptomatic primary infection develop AIDS and immunodeficiency earlier than those with asymptomatic HIV seroconversion. The severity and duration of the acute HIV illness or symptoms may determine how soon patients

develop AIDS-related diagnoses.

Highly Active AntiRetroviral Treatment (HAART) during symptomatic primary infection may help to preserve and rebuild the patient's immune system.

During this period of time a person is extremely infectious and may more easily pass on the infection through the usual modes of transmission (body fluids and blood exchanged from person to person). This knowledge presents a window of opportunity for focusing prevention efforts to limit the spread of the disease during its most infectious period.

Vaccinate Adults!

“70% of reported cases of tetanus between 1980 and 2000 were among persons 40 years of age or older. This is why it is important for all adults to make sure that their tetanus boosters are up-to-date.”

**Beth Rowe-West
Immunization Branch Head
DHHS**

The Immunization Action Coalition (IAC) publishes stories about people who have suffered or died from vaccine-preventable diseases. The following is one such case:

- ⇒ On December 19, 2001, a man aged 86 years with a history of hypertension and coronary artery disease sustained a splinter in his right hand while gardening. On December 22, the patient saw a physician for wound care. At that time, he was not treated with either a tetanus toxoid (TT) vaccine or prophylactic tetanus immune globulin (TIG). His tetanus vaccination history was not documented in the medical record; he had no history of military service.
- ⇒ On December 26, the patient received treatment for pharyngitis from a local physician. On December 29, he presented to an emergency department with difficulty talking, swallowing, and breathing and with chest pain and disorientation of 2 days duration. He was admitted to a general medicine ward with a preliminary diagnosis of stroke.
- ⇒ On January 2, 2002, the patient had neck rigidity and respiratory failure requiring tracheotomy and mechanical ventilation and was transferred to the intensive care unit with a diagnosis of tetanus. A dose of Td was administered; TIG was ordered but was unavailable.
- ⇒ On January 11, the patient received nonspecific intravenous immune globulin. His hospital course was complicated by two myocardial infarctions, congestive heart failure, a

lacunar stroke, and pneumonia. He died on February 2.

Because almost all tetanus-associated deaths are preventable through adequate vaccination, health-care providers should make sure all patients seen for routine visits, including older patients, receive a tetanus booster if they haven't had one in the past ten years. Note: For both routine boosters and managing the wounds of adults, Td is preferred over TT alone to enhance protection against diphtheria, to which many adults are also susceptible. The case above underscores that health-care providers should ensure that all patients have been vaccinated fully against tetanus. For information on the recommended

Adult medical specialists (e.g., gynecologists, cardiologists) who don't routinely vaccinate may not ask their patients about their vaccination history. Often times these specialists are the only doctors adults see. The problem created here is simple: the patient may not receive needed vaccines. Unprotected adults have suffered or died from vaccine-preventable diseases such as pneumococcal disease or tetanus. The solution is obvious: adult medical specialists should become actively involved in educating their patients about the seriousness of vaccine-preventable diseases.

adult immunization schedule, visit the National Immunization Program Website at www.cdc.gov/nip or contact Shannon Gilbert at gilbesn@co.mecklenburg.nc.us or 704.353.1270.

Did you know.....

.....that the Health Department is involved in a state-wide exercise called “Triple Play”? It is a practice exercise that began in Guilford County in mid October and will continue in Mecklenburg with the simulated request and receipt of medicines from the Strategic National Stockpile (SNS). The Health Department, Office of Emergency Management, County Homeland Security Office and numerous volunteers from the county will prepare to receive, distribute and dispense drugs that would be available for an outbreak of pneumonic plague, the disease chosen for this exercise. The Health Department will be evaluated on this exercise and it will serve to determine how many actual dispensing sites will be necessary to distribute medications to everyone in Mecklenburg County if a situation demands that action. The third part of the Triple Play continues in December when issues of quarantine and isolation of contacts and cases will be at the forefront.

Reportable Diseases In North Carolina

Telephone reports are requested within 24 hours for diseases of unusual significance, incidence, or occurrence which may merit an epidemiological evaluation; and foodborne and waterborne outbreaks where a common source is suspected.

Telephone reports should include the following information:
disease; date of onset; patient name/address/phone number/age/race/sex; laboratory confirmation (yes or no); name and phone number of person making the report.

Report within 24 hours (by phone and card)

Anthrax	HUS/Thrombotic Thrombocytopenic Purpura	Salmonellosis
Botulism	Hepatitis A	SARS
Campylobacter infection	Hepatitis B, Acute	Shigellosis
Chancroid	Hepatitis B, Perinatal	Smallpox
Cholera	Listeriosis	Syphilis, All Stages
Cryptosporidiosis	Measles (Rubeola)	Tuberculosis
Cyclosporiasis	Meningococcal Disease	Tularemia
Diphtheria	Monkeypox	Typhoid, Acute
E. coli, Shiga toxin-producing	Plague	Vaccinia
Foodborne Disease	Polio, Paralytic	Vibrio Infections
Gonorrhea	Rabies, Human	Viral Hemorrhagic Fever
Granuloma Inguinale	Rubella	Whooping Cough
H. Influenzae, Invasive Disease		

Report within 7 days (by card)

AIDS	Legionellosis	Rubella Congenital Syndrome
Brucellosis	Leptospirosis	Streptococcal Infection, Group A, Invasive Disease
Chlamydia	Lyme Disease	Tetanus
Dengue	Lymphogranuloma Venereum	Toxic Shock Syndrome
Ehrlichiosis, Granulocytic	Malaria	Toxoplasmosis, Congenital
Ehrlichiosis, Monocytic	Meningitis, Pneumococcal	Transmissible Spongiform En- cephalopathies (CJD/vCJD)
Encephalitis, Arboviral	Mumps	Trichinosis
Enterococci, Vancomycin resistant	Nongonococcal Urethritis	Typhoid Carriage
Hantavirus Infection	Psittacosis	Typhus, Epidemic louse-borne
Hepatitis B, Carrier	Q Fever	Yellow Fever
Hepatitis C, Acute	Rocky Mountain, Spotted Fever	
HIV infection		

Reporting Communicable Diseases – Mecklenburg County
To request N.C. Communicable Disease Report Cards, telephone 704.336.2817
Mark all correspondence “CONFIDENTIAL”

Tuberculosis:

TB Clinic		704.432.2666
Mecklenburg County Health Department	FAX	704.432.2493
2845 Beatties Ford Road		
Charlotte, NC 28216		

Sexually Transmitted Diseases, HIV, & AIDS:

Regional Office HIV/STD Surveillance		704.336.6480
Mecklenburg County Health Department	FAX	704.336.6200
700 N. Tryon Street, Suite 214		
Charlotte, NC 28202		

All Other Reportable Communicable Diseases including Viral Hepatitis A, B & C:

Report to any of the following nurses:

Shannon Gilbert, RN		704.353.1270
Nancy Hill, RN,		704.336.5498
Jane Hoffman, RN,		704.336.5490
Lorraine Houser, RN		704.336.6438
Monica O’Lenic, RN		704.336.6436
Elizabeth Quinn, RN		704.336.5398
Communicable Disease Control	FAX	704.353.1202
Mecklenburg County Health Department		
700 N. Tryon Street, Suite 271		
Charlotte, NC 28202		

Animal Bite Consultation / Zoonoses / Rabies Prevention:

Al Piercy, RS		704.336.6440
Communicable Disease Control	FAX	704.353.1202
Mecklenburg County Health Department		
700 N. Tryon Street, Suite 272		
Charlotte, NC 28202		
or State Veterinarian, Lee Hunter, DVM		919.733.3410
State after hours		919.733.3419

Child Daycare Nurse Consultant:

Gail Mills, RN		704.336.5076
Communicable Disease Control	FAX	704.353.1202
Mecklenburg County Health Department		
700 N. Tryon Street, Suite 271		
Charlotte, NC 28202		

Suspected Food borne Outbreaks / Restaurant, Lodging, Pool and Institutional Sanitation:

Food & Facilities Sanitation		704.336.5100
Mecklenburg County Health Department	FAX	704.336.5306
700 N. Tryon Street, Suite 208		
Charlotte, NC 28202		

Mecklenburg County Health Department

Rabies in Mecklenburg County



During 2003, Mecklenburg County recorded the most cases of domestic and wild animal rabies since the 1950's. Through October, 40

wild animals (bats, foxes, raccoons, and skunks) and two domestic cats

have been found to be rabid.

Viral rabies (a member of the Rhabdoviridae family), if acquired by a human or animal, is uniformly fatal. In humans, a combination treatment of immunoglobulin (RIG) and vaccine must be initiated quickly to prevent this fatal disease. For this year, the Health Department has recommended this treatment for more than 200 people after bites or exposures to known or suspected rabid animals.

Both pre- and post-exposure treatments are available for humans. For

the protection of pets (cats, dogs, and ferrets), there is **ONLY** a pre-exposure rabies vaccine that must be given at least 15 days prior to any exposure to a rabid animal. Although vaccination of animals has reached record numbers, there are still some owners who neglect this life-saving immunization for their pets. This endangers both the animals and the citizens of Mecklenburg County.

For more information, contact Al Piercy at piercaw@co.mecklenburg.nc.us or 704.336.6440.

They Didn't Have To Die

The following case history involves a cat with no rabies immunization that succumbed to the rabies virus in September of this year. We are grateful to the Carolina Veterinary Specialists for their permission to use this in our newsletter:

Sebastian was a 9-year-old, neutered male cat living outdoors until July when he was attacked by an unknown animal and received numerous bite wounds—the worst one was on the right rear hock. He was brought into the clinic on July 1, 2003, for evaluation. The owner declined further diagnostic testing and Sebastian was treated symptomatically with antibiotics. He was not vaccinated for rabies until July 7th, which was after he sustained the bite wounds. He improved with antibiotics and the owner had been keeping him on her deck since that time while he recovered. A few weeks later, Sebastian started to self-mutilate on the right rear at the right hock. The wounds had healed prior to that time. The owner was out of town for the weekend and on returning, she saw that Sebastian was substantially worse and was unable to use his back legs. She found a wound on his right rear leg at that time. She does

not know if something attacked him or if he just got worse on his own. On September 29th, the owner brought him into the emergency clinic for evaluation. He was hypothermic, panting, and was unable to stand on his own having weakness in his rear legs. By the next morning, he had an altered mental state and nystagmus with eyes twitching in opposite directions.

During the night, Sebastian bit and broke the skin of the veterinarian who was examining him. He scratched the owner in the past and he tried to bite her, but the owner said that Sebastian never broke the skin. While in the clinic, he urinated on a veterinary technician when he was brought out of the cage for evaluation. A second veterinary technician and veterinarian also had contact with the cat in terms of touching him but were not bitten, scratched or otherwise exposed to bodily fluids.

Also, the owner had another unvaccinated cat at home. That cat was acting normal at the time of Sebastian's illness. Sebastian never bit the other cat, and they did not interact with each other except to hiss at

each other, but they were living in the same direct environment.

Sebastian was euthanized, tested at the North Carolina State Public Health Rabies Laboratory, and found to be **positive** for rabies on October 1st. In this case the veterinarian and staff were adequately vaccinated with the pre-exposure rabies vaccine and needed only booster shots for protection. For the other family and community members exposed to this cat, complete post-exposure rabies treatment was required at a cost of thousands of dollars. This cost could have been avoided by the simple immunization of the cat.

The other cat in the home was required to be euthanized because of his exposure and lack of a routine, inexpensive rabies vaccine. He tested negative for rabies.

For more information, contact Al Piercy at piercaw@co.mecklenburg.nc.us or 704.336.6440.

